

**REMARKS****Summary of the Office Action**

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Riman et al. (US 7,022,303) in view of Wakino (US 5,441,657).

Claims 1 and 2 are objected to for informalities.

**Summary of the Response to the Office Action**

Applicants have amended claims 1 and 2 to clarify perceived misinterpretations unrelated to patentability, amended the Specification to improve language and format of the Abstract of the Disclosure, and added new claims 3-7 to further define the invention. Accordingly, claims 1-7 are pending for consideration.

**Abstract of the Disclosure**

Although not specifically objected to, Applicants have amended the Abstract of the Disclosure to improve language and format based upon the reminder provided in the Office Action. Applicants respectfully assert that the amended Abstract complies with requirements set forth by the Office.

**Claim Objections**

Claims 1 and 2 are objected to for informalities. Specifically, claim 1 is objected to for recitation of "a single-crystal particle," wherein the Office requires appropriate correction. The Office Action indicates that, for purposes of examination, the phrase "a single-crystal particle" is interpreted as one or more particles and not a single particle. First, Applicants respectfully point-

out that the phrase “single-crystal particle” refers to a particle having a single crystalline structure, as opposed to a particle having a plurality of crystalline structures, i.e., polycrystalline structure. Accordingly, Applicants wish to clarify that an interpretation of the phrase “a single-crystal particle” as a particle having one or more crystalline structures would be incorrect.

Second, Applicants respectfully assert that the proposed interpretation by the Office is not consistent with the features clearly recited by claim 1, as originally filed. Although the specification may disclose a plurality of single-crystal particles, Applicants’ originally-filed claim 1 is fully supported by the specification, and as such, the *reading into* the claim by the Office as an implied recitation of “one or more particles” is not necessarily correct for purposes of examination. However, to advance prosecution of the instant application, Applicants have amended claim 1 to recite, in part, “at least one single-crystal particle.” Accordingly, Applicants respectfully assert that claim 1, as presently amended, is still fully supported by the Specification and provides for a condition in which the claimed piezoelectric sheet includes one single-crystal particle.

With regard to the objection to claim 2, Applicants respectfully assert that recitation of “a proportion” is clear, definite, and correct, whereas the Office requires appropriate correction. Requiring Applicants to amend claim 2 to recite “the proportion” raises an issue of lack of antecedent basis for the phrase “the proportion.” Specifically, since claim 1 does not introduce features of *a proportion*, then any reference to “the proportion” by claim 2 would potentially render claim 2 indefinite under 35 U.S.C. § 112, second paragraph. Moreover, requiring

Applicants to amend claim 2 to recite “the proportion” would inappropriately imply a specific and unintended proportion of the single-crystal particle. Applicants respectfully assert that claim 1 does not imply or suggest any proportion of the single-crystal particle. Accordingly, Applicants have not amended claim 2 to recite *the* proportion.

For at least the above reasons, Applicants respectfully request that the objections to claims 1 and 2 be withdrawn.

**All Claims Define Allowable Subject Matter**

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Riman et al. (US 7,022,303) in view of Wakino (US 5,441,657). Applicants respectfully assert that the applied prior art fails to establish a *prima facie* case of obviousness with regard to at least independent claim 1.

The Office Action alleges that Riman et al. and Wakino teach or suggest the combination of features recited by at least independent claim 1. However, Applicants respectfully assert that both Riman et al. and Wakino are completely silent with regard to a piezoelectric sheet having a cubic lead zirconate titanate single-crystal particle that “penetrates the plane of said sheet from one to the other side.” In addition, Applicants respectfully assert that the Office Action fails to address where in either of Riman et al. or Wakino that this feature is taught or suggested. Moreover, Applicants respectfully assert that none of the prior art cited in the Office Action teaches or suggests a piezoelectric sheet having a cubic lead zirconate titanate single-crystal particle that “penetrates the plane of said sheet from one to the other side,” as required by

independent claim 1. Accordingly, Applicants respectfully assert that the Office Action fails to establish a *prima facie* case of obviousness.

### **New Claims 3-7**

Applicants have added new claims 3-7 to further define the claimed invention.

Applicants respectfully assert that new claims 3-7 are fully supported by the specification and do not introduce new matter. In addition, Applicants respectfully assert that new claims 3-7 are allowable for at least their dependence upon independent claim 1, as well as the features that new claims 3-7 individually recite.

### **CONCLUSION**

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under

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37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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